The Times and Register.

VOL. XXVII. No. 12. PHILADELPHIA, MARCH 24, 1894. WHOLE No. 811.

Original.

SOME ANATOMICAL AND SURGICAL RELATIONS OF THE PARTS INVOLVED IN THE OPERATION OF INTRA-CRANIAL NEURECTOMY OF THE FIFTH PAIR OF NERVES AND REMOVAL OF THE GASSERIAN GANGLION. *

BY WILLIAM J. TAYLOR, M. D.

Professor of orthopaedic surgery in the Philadelphia polyclinic; attending surgeon to St. Agnes' Hospital; assistant surgeon to the orthopaedic hospital and infirmary for nervous diseases.

Intra-cranial neurectomy of the fifth nerve and the removal or destruction of the Gasserian ganglion must now be given its place as one of the most beneficial as well as one of the most brilliant and difficult operations in surgery.

Rose and Hartley have given us very definite directions as to the mode of opening the skull and general surgical technique, but I have failed to find an exact statement by anyone of the relative positions of the foramina, the ganglion, and arteries. It is with the hope of adding to our knowledge of these anatomical and surgical relations that, at the suggestion of Dr. W. W. Keen, I have lately made a careful study of the interior of twenty skulls taken in the most part from the collection in the Mutter Museum of the College of Physicians. My aim has been to establish by accurate measurements the distance between the foramina of exit of the second and third branches and to establish definitely their relationship with the foramen spinosum, the carotid canal, and the depression or fossa for the ganglion. As is well known this ganglion, a red-dish-gray band of ganglionic matter slightly curved in its long axis so as to present a convexity forward and outward, rests upon a depression in the petrous portion of the temporal bone. From the convex antero-external border three large bundles of nerve fibres arise.

The first or ophthalmic division is the smallest and is purely sensory in function. It arises from the upper portion of the ganglion, enters the cavernous sinus, and passes forward in contact with the outer wall of the cavernous sinus, through the sphenoidal fissure into the orbit.

The second or superior maxillary division, also a sensory nerve, passes out through the foramen rotundum and enters the orbit through the spheno-maxillary fissure.

The third or inferior maxillary, the largest of the three divisions, consists of two portions: the larger or sensory root arising from the inferior angle of the ganglion, and the smaller or motor root passes beneath the ganglion. This latter accompanies the sensory root and joins it after it emerges from the foramen ovale.

A small branch, the recurrent, passes into the cranium through the foramen spinosum along with the middle meningeal artery. This divides into two small branches—to be distributed to the dura mater and to the lining membrane of the mastoid cells.

As will be seen by this short account of the three divisions of the fifth nerve, it is impossible to make a definite section of the first division without doing great damage to the cavernous sinus, the third, fourth and sixth nerves, and the carotid artery.

*Read before the Philadelphia County Medical Society, February 14, 1894.

We must be contented to cut the attachments and remove or destroy the ganglion, and with it the second and third divisions as they pass through the foramen rotundum and foramen ovale.

The middle meningeal artery as it enters the cranium through the foramen spinosum must frequently be wounded or torn through in our endeavors to reach the ganglion. For this reason it is often wiser to ligate and deliberately cut it than to run the risk of tearing it as it passes through the foramen; when by any chance this occurs our only means of controlling the hemorrhage is by packing the foramen or the ligation of the external carotid artery below the origin of the internal maxillary artery.

In this examination for convenience, and because it is a measure with which we are all familiar, I have taken the inch and its sub-divisions of sixteenths as the most readily understood and easiest obtained unit of comparison.

First. I have measured the distance, centre to centre, from the foramen spinosum to the foramen ovale; from the foramen ovale to the foramen rotundum, and from the foramen spinosum to the foramen rotundum.

Second. I have measured, centre to centre, the distance by which the foramen ovale is in front of the foramen spinosum, taking the sides of an imaginary parallelogram, the foramen spinosum being the external and posterior, and the foramen rotundum the anterior and internal points.

Also, the distance by which the foramen ovale is internal to the foramen spinosum, the distance by which the foramen rotundum is anterior to the foramen spinosum, and the distance by which the foramen rotundum is internal to the foramen spinosum.

Third. The diameters of the three foramina—spinosum, ovale, and rotundum.

Fourth. The distance between the centre of the foramen rotundum and the depression or fossa for the ganglion, and from the centre of the foramen ovale to this fossa for the ganglion.

Fifth. The width of the bridge of bone between the foramen ovale and the carotid canal.

In going over these skulls carefully I have found such a great inequality in the measurements between the two sides that I have made a definite note of these variations, and give in my table the greatest, the least, and the mean measurements. Possibly a better understanding of the system of measurements may be gained by a glance at Fig. 1, which shows the relative positions of foramina, etc.

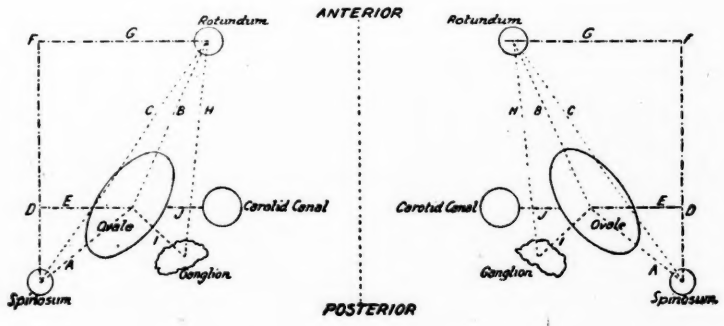

Fig. 1.

A, Spinosum to ovale. B, Oval to rotundum. C, Spinosum to rotundum. D, Ovale anterior to spinosum. E, Ovale internal to spinosum. F, Rotundum anterior to spinosum. G, Rotundum internal to spinosum. H, Rotundum to ganglion. I, Ovale to ganglion. J, Bridge of bone between foramen ovale and carotid canal.

I have also had made a series of twelve photographs, and of these have selected four of the most typical. In these the inequality is seen most distinctly.

Fig. 2.

The distance between the centre of the foramen spinosum and the centre of the foramen ovale from 2 to 9, with a mean distance of about 4 15-20 sixteenths of an inch.

Fig. 3.

The centre of the foramen ovale to the centre of the foramen rotundum varies from 6 to 13, with an average of between 9 9-20 and 10 7-20 sixteenths of an inch.

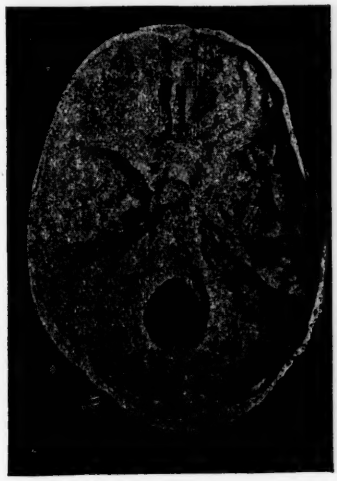

Fig. 4.

The centre of the foramen spinosum to the centre of the foramen rotundum varies from 8 to 17, with an average of betwen 13 2-20 and 14 12-20 sixteenths of an inch.

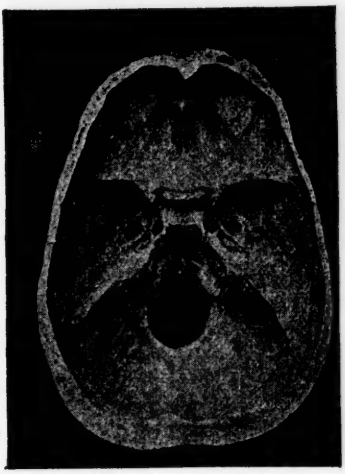

Fig. 5.

The centre of the foramen ovale is anterior to the centre of the foramen spinosum from 2 to 6, with an average of from 3 4-20 to 3 7-20 sixteenths of an inch.

The centre of the foramen ovale is internal to the centre of the foramen spinosum from 2 to 6, with an average of from 3 9-20 to 3 11-20 sixteenths of an inch.

The centre of the foramen rotundum is anterior to the centre of the foramen spinosum from 9 to 14, with an average of from 11 10-20 to 12 sixteenths of an inch.

The centre of the foramen rotundum is internal to the centre of the foramen spinosum from 4 to 11, with an average of from 7 13-20 to 8 11-20 sixteenths of an inch.

The distance from the centre of the foramen rotundum to the centre of the fossa for the Gasserian ganglion varies from 8 to 16, with an average distance of between 13 and 13 6-20 of an inch.

The centre of the foramen ovale is distant from the centre of the fossa or groove for the ganglion from 2 to 9, with an average distance of 5 12-20 sixteenths of an inch.

The width of the bridge of bone between the foramen ovale and the carotid canal varies from 1 to 9, with an average width of from 4 13-20 to 5 1-20 sixteenths of an inch.

The diameters of the foramina have been determined to be as follows:

The spinosum varies from less than 1 to 3, with an average of from 1 9-20 to 1 12-20 sixteenths of an inch.

The ovale varies from 3 to 6, with an average of 4 16-20 of an inch.

The rotundum varies from 1 to 3, with an average of between 2 1-20 and 2 2-20 sixteenths of an inch in diameter.

It will be seen by these measurements, and by a glance at the accompanying photographs and table, that the relationship between these different points is by no means constant, and in operating we must realize the fact. In the majority of instances the foramen spinosum, with the middle meningeal artery, is far enough away from the foramen ovale and the third branch of the nerve to enable us successfully to cut the latter without wounding the blood vessel. This is particularly marked in Fig. 4, on the left side, where the distance is 9-16 of an inch. On the other hand, the spinosum may be so nearly in a line with the ovale that to reach it without wounding the middle meningeal artery would be impossible. In some of the reported cases of the operation where mention is made of alarming hemorrhage I am convinced this state of affairs existed.

For this reason, whenever the exposure of the third branch of the nerve is at all difficult, the surgeon should at once search for, ligature the artery, and cut it across, before attempting to find the nerve. This ligation of this artery is not very difficult, and will at once give much greater freedom of action.

The size and shape of the foramina vary in different skulls; especially is this so with the ovale, which is at times perfectly round.

The rotundum is most constant in its shape, and its variations are of little importance to the surgeon.

The spinosum varies much, and in one instance (Fig. 3), as is well shown in the photograph, there are two distinct foramina on the left side.

The character and sex of the skull seem to have little bearing upon the relative position of the foramina, with the exception that a broad, flat skull usually shows a greater distance between them, and it has been impossible to fix upon any rule by which these variations may be anticipated.

THE TREATMENT AND CURE OF CHANCRE WITH PEROXIDE OF HYDROGEN.

BY WILLARD PARKER WORSTER, M. D., NEW YORK.

The subject of the best treatment of the primary sore of syphilis has occupied the minds of investigators of late years to such an extent that almost every surgeon has a different method, and the general practitioner is somewhat at a loss to know which is the best treatment to employ as the most expeditious means of relieving the anxiety of the patient and curing the lesion. The special purpose of this paper is to draw attention to a particular method of treatment, which not only relieves the anxiety of the patient and places him in a delightful buoyancy of mind, but cures the chancre in the shortest possible time, without pain or detention from

business, and with less scar and less destrustion of tissue than any other method.

The chancres of the following cases, selected from a good many recorded, were of the large Hunterian variety, embracing the worst forms of sloughing and phagedena.

Case I.—Mr. K., aged 38 years, came to me, January 29th, 1891, with a large sloughing single chancre, situated on the right side and at the base of the glans penis, at the junction of the prepuce and very deep; incubation about thirty days; penis large and soft. Sprayed it with full strength solution (15 volumes) of peroxide of hydrogen medicinal (Marchand's), at 60 pounds pressure, and dressed with iodol powder, and continued the same treatment every morning at 7 o'clock.

February 20, sprayed it as above; sore now only skin deep, and continued till February 23 ; sore healed; duration of treatment twenty-five days.

Case II.—Mr. W. B. came to me, September 6, 1892, with a single sloughing chancre on left glans penis, and corresponding ulceration on prepuce; incubation about thirty days; sprayed with peroxide of hydrogen, full strength, 60 pounds pressure, and dressed with iodol; continued same treatment every evening at 7.30 o'clock, for sixteen days. September 23, sore almost healed. September 25, sprayed for the last time to-day; duration of treatment, nineteen days.

Case III.—Mr. L., aged 28 years, came to me, August 23, 1893, with a phagedenic chancre, thirty-five days' incubation, situated immediately at meatus urinarius, and sloughing its way very rapidly into the urethra; sprayed it with peroxide of hydrogen, full strength, 60 pounds pressure, and dressed with iodol powder. Continued the same treatment every evening at 7.30 o'clock.

August 30, sore almost healed up, only some granulations left. Continued the same treatment every evening till September 4. Sprayed it to-day for the last time; there only being the surface of the sore about the size of pin's head. Considered himself cured and said he would not come again. Duration of treatment, eleven days.

The above cases, selected from many recorded cases, on account of their possessing the worst features of the initial lesion, serve as good examples of the treatment by the peroxide of hydrogen method.

I treated Mr. K., of case I, on two different occasions, for the same disease, in exactly the same manner, and the two cases are about identical in regard to length of time of treatment and as to details, and he got well in about the same manner. The case of Mr. L. presented the worst features of phagedena, which was so virulent that I think he would have lost the greater part of the glans penis if he had been treated by the nitric acid or caustic method, and, as it was, the ulcer healed with a very small scar, scarcely noticeable.

The pressure of the spray (60 pounds), which is one of the most important factors in the whole method, not only cleanses and produces thorough asepsis of it, killing the germs of the disease at the very bottom of the ulcer, but the oxygen of the peroxide aerates the blood through the capillaries, and arrests the progress of the disease at the nearest posible point, allowing the process of repair to commence as soon as possible, according to the severity of the disease, with the least loss and destruction of tissue and consequent scar.

It must be particularly understood that in using this treatment, all instruments, spray-tubes and bottles, must be made of either glass or hard rubber, for the reason that metals, with one or two exceptions, coming in contact with the peroxide, will destroy its component parts and render it useless, and I have found also a great difference in the results if the peroxide is fresh or otherwise.

The first effect of a spray of peroxide upon the ulcer is to deposit upon it a thick film of albumen; this should be allowed to remain for about half a minute or less; then continue the spraying till a large tubeful has been used (one ounce); as the sore progresses the spraying causes a good flow of rich arterial blood upon it, which merely shows returning healthy conditions.

The treatment is entirely painless, and the patients do not experience any annoyance or inconvenience whatever while carrying the disease, and freely express themselves as well pleased with its effect. No internal medication during this stage is given. The iodol powder is used only as an antiseptic, to protect the sore from external influences until it is sprayed again the next day, keeping the sore in as good a condition as it is left by the spraying, which must be done once every day until the ulcer is healed.

This method of the treatment of chancre has been in my hands the best and most successful of all methods that I have heretofore adopted.

120 West Forty-ninth street.

The Times and Register.

A Weekly Journal of Medicine and Surgery.

Subscription Price, - - - $1.00 Per Year.

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PUBLISHED BY

THE MEDICAL PUBLISHING CO.,

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PHILADELPHIA, MARCH 24, 1894.

ACUTE RHINITIS, OR ACUTE NASAL CATARRH.

At this season of the year when many are subjected to the sudden changes of temperature and there is a certain amount of acute nasal irritation to the mucous membrane in the cool winds of spring, rhinitis appears in those who are predisposed to such inflammatory conditions.

"How shall I ward off a cold?" is asked of every physician more or less frequently during the springtime, and invariably we are often in a dilemma for the correct answer.

The causes of sudden "colds" do not always lie in the condition of health an individual may be in. In fact, many outside conditions are to be taken into account when summing up the etiology of acute rhinitis; for instance, a crowded steam or street car will sometimes be a factor in causing nasal catarrh in one person, as a sudden change in temperature, or exposing the body to damp and wet, will be the causative factor to another.

Again, the attack of rhinitis, once inaugurated, may easily be augmented and prolonged by too irritating applications to the mucous membrane of the nasal cavity.

The different modes of treatment of this affection are legion. While one applies local medications another tries sytemic. One will insufflate and another purge or sweat; neither, perhaps, doing any evident good in shortening the attack or mitigating its severity.

The main point in the treatment of this affection is to keep the mucus membrane clean and free from pus and detritus with as mild an application as possible. This can be done with a little peroxide of hydrogen diluted with 50 per cent. water and afterwards applying a snuff of borate of soda and carbonate of bismuth with a small amount of hydrochlorate of cocaine incorporated.

Other excellent washes for the nasal mucous membrane are borate of soda in camphor water, ten grains to the ounce, or a tablet of the Dr. Seiler formula.

Water alone is a trifle irritating to some nasal mucous membranes, and must contain a slightly alkaline substance in solution.

Often, in spite of treatment, the diseased condition runs its course of a week or ten days without material shortening of the period.

ANTIDIPHTHERIN.

Dr. V. G. Grigorieff, of Moscow (British Medical Journal, No. 1731), has used Klebs' specific for diphtheria in four cases of diphtheria in children, and comes to the conclusion that the remedy is worthless.

In spite of the paintings, repeated thrice daily, false membranes continued to spread steadily, fever remained high or even increased, etc.

Two children—one of whom, aged 8, had been admitted on the third day of the disease, and the other, aged 15 months, on the second—died in 48 and 24 hours respectively.

In the third patient, aged 4 years and 7 months, admitted on the fourth day of illness, who had been getting worse during a four days' treatment by "antidiphtherin," local applications of a 1 per mille solution of corrosive sublimate were substituted, with the result that the faucial deposits began to disappear, and the child ultimately made good recovery.

Exactly the same course of events was observed in a boy aged 4 years

and 7 months, in whom the "antidiphtherin" treatment was commenced on the second day of symptoms, but given up in about 24 hours, on account of a considerable aggravation of fever and local condition.

The bichloride paintings cleared the child's throat in about four days. A set of elaborate experiments, undertaken by the author in order to test the bactericidal effects of Klebs' preparation, proved that (1) the latter does not in the least inhibit the development of diphtheria bacilli even after 24 hours' continuous contact; (2) a 1 per mille solution of bichloride of mercury destroys the microbes even after a two minutes' contact, and (3) bichloride of mercury has an additional advantage over "antidiphtherin," inasmuch as it kills any species of bacteria which happen to be present in a diphtheria patient's throat.

THE MEDICAL PROFESSION AND THE SOCIAL EVIL.

An editorial in a recent number of the New York "Medical Journal" deals with the necessity of prostitution very admirably.

That prostitution is not a necessity is not only evident from a clinical standpoint, but from a moral sense as well. The question is how can it be obliterated entirely?

The wretched diseases caused by prostitution, the impairment of organs destined to perform the highest function of animal life (reproduction) by its existence, and the cruel infection of the innocent all point to the absolute dangerous consequences of this social evil.

The well-founded idea in the popular mind, especially in the minds of young men, that coitus is necessary for health, every good physician knows to be false. This is a point to be emphatically pronounced upon, and is the one to which our profession should never lend assent.

We, as physicians, can collectively declare that sexual indulgence is not only not necessary for health but absolutely harmful when carried into the realm of prostitution. We should so emphatically declare this that there would be no room for doubt in the minds of the young that danger lies on every side, not only to themselves but also to possible posterity.

APPENDICITIS.

In a "Treatise on Medico-Chirurgical Therapeutics of Childhood," Dr. P. Le Gendre thus describes the symptoms and treatment of appendicitis previous to operation: "Appendicitis usually announces itself by severe pain in the right iliac fossa, sudden elevation of temperature, tympanitis, vomiting and mostly constipation, but sometimes diarrhea, and examination of the fossa will reveal a tense, firm, painful condition.

"These symptoms do not warrant immediate operation, but medical treatment should be commenced by the administration of opium in small hourly doses, and rigorous diet and absolute repose enjoined. A tablespoonful of distilled water every fifteen minutes during the first day and a teaspoonful of skimmed milk every hour.

"On the second day, the milk may be progressively increased. Later on, milk may be freely given, with soups and boiled eggs, but no bread. Enemas of water with 10 to 20 grammes of borax may be used, but purgatives must be left severely alone. Under such treatment, cases of appendicitis will quite frequently get well without the necessity of operation within a few weeks, though some tenderness and sensitiveness under pressure may remain in the fossa.

"In any case, careful hygiene will have to govern the feeding, and all indigestible food must be withheld, eggs and milk being the mainstay for quite a while.

"There is always a possibility of relapse, and when this ocurs operation becomes advisable, as the patient is likely to succumb early in a second attack."

Book Notes.

TABLES AND NOTES ON HUMAN OSTEOLOGY. By Sebastian J. Wimmer, A. M., M. D. with a reference by William F. Waugh, A. M., M. D. Published by the Medical Publishing Company. Price, $1.50.

This is the best work of its kind we have ever seen. It contains a clear, concise and comprehensive arrangement of all the bones in the body with their anatomical relations, their situation, form, structure, development and surfaces.

It is tabulated so clearly that the student can find at a glance any bone he wishes, with all its anatomical structures or any irregularities.

The work contains two hundred and forty pages, printed on substantial paper and can easily be slipped in the pocket. It will easily be adapted as a concise substitute to larger text books, the latter of which can be read at leisure.

This work follows Gray very closely. It is an excellent thing to freshen one's memory of anatomy for the quiz room, college, or State board examinations. It is well worth the small price asked.

THE DISPENSATORY OF THE UNITED STATES OF AMERICA. By Dr. George B. Wood and Dr. Franklin Bache. Seventeenth Edition. Revised, largely rewritten and introducing illustrations by H. C. Wood, M. D. LL. D.; Joseph P. Remington, Ph. M. F. C. S. and Samuel P. Sadtler, Ph. D. F. C. S. Published by the J. B. Lippincott Co., Philadelphia, Pa., 1894.

This edition contains nearly two thousand pages, following, of course, the alterations in the late revision of the United States Pharmacopeia very closely.

It introduces the metric system exclusively, which marks an era in the practice of pharmacy. This change involves the uprooting of a system of weights and measures which has been in common use for centuries.

One of the most important changes is the following of the Pharmacopeia in the adoption of the new chemical nomenclature which requires that the basylous or metallic component of the compound shall be placed first.

In Section 2 of Part 2 is found one thousand separate articles, an increase of 25 per cent. beyond the cor- is an admirable addition.

A new index termed "Index of Diseases" immediately precedes the main text at the beginning of the book in order to prevent possible confusion with the general index.

The book is similarly published to previous editions. A new feature in a thumb index on the margin of the book is an admirable addition.

SYPHILIS IN THE INNOCENT. By L. Duncan Buckley. Published by Bailey & Fairchild, N. Y. Price, $3.50; Cloth, 8vo.

This book is a contribution to the study of syphilis, the result of 10 years' work, and is the essay to which the College of Physicians of Philadelphia in 1891 awarded the Alvarenga prize for best memoir on any medical subject.

It holds that syphilis is not essentially a venereal disease, but that its non-venereal character has not been fully considered, and the attempt is made to consider only its innocent occurrence, and the modes of infection whereby it is innocently acquired by means wholly unconnected with the venereal act.

Clinical records are given of 116 cases of extra-genital chancres.

Another table, as complete as possible, gives the epidemics of syphilis which have occurred from the year 1577 to the present time, containing data relating to over 100 epidemics great and small.

This work is invaluable for reference to the subject of syphilis, and takes a new turn toward the causation, which, in many instances, is apart from the venereal act.

THE IMPORTANCE OF EMPLOYING ANESTHESIA IN THE DIAGNOSIS OF INTRA-PELVIC GYNECOLOGICAL CONDITIONS. DEMONSTRATED BY AN ANALYSIS OF TWO HUNDRED AND FORTY CASES. By Hunter Robb, M. D. From the Johns Hopkins Hospital Report, Baltimore, Md.; illustrated.

This pamphlet sets forth the utility of anesthesia in gynecological examination, and contains tabulated reviews of cases so treated, with the results.

THE EASTER NUMBER OF "THE LITERARY DIGEST."

The whole world has been traversed to find material for the Easter number of "The Literary Digest." Almost every civilized language will be represented. It will be superbly illustrated, full of information; treating all questions of present interest, and all sides of those questions; presenting the leading articles in the foremost magazines and journals of the world. This number of "The Literary Digest" will probably excel any other attempt to give the literature of the world in one issue. The Easter number will be ready on Thursday, March 22.

Medicine.

Under the charge of E. W. Bing, M. D., Chester, Pa.

EXPERIMENTS ON THE HISTOLOGICAL MECHANISM OF GLANDULAR SECRETIONS. —RAUVIER.

The glands have long been considered as simple filters of the blood. The evolution of cells of the sebaceous glands and of the breasts led histologists to the knowledge that the cells themselves elaborate the products which form the material of the secretion. This is easy to demonstrate, especially in the sebaceous glands, since in these the intercellular formation of fat, and its liberation by the destruction of the cells containing it, may be observed.

It has been thought that a similar mechanism obtains with regard to the mucous glands. This, however, is not the case. The cells which form the mucus are not destroyed in the process. Rauvier has designated this variety of gland by the name of "mesocrinous gland" reserving the name of "nolocrinous gland" to those in which the product consists of the entire cellule.

He has found that in mucous glands the cellules contain, besides their mucus forming (mucigenous) quality, and protaplasm, vacuoles which are in physological motion and whose activity may be much increased by electric excitation.

It was required to show whether this vacuolar motion existed in the granular glands, as in the mucous glands. The researches were made on the submaxilliary gland of the rat.

A weak induction current, gradually increased, was allowed to traverse the gland, so as to provoke an abundant salivary secretion. The glands were fixed by osmic acid and sections prepared.

The sections of the now excited gland showed the culs-de-sac filled with granular cellules, each furnished with a central nucleus. In a few cells small vacuoles were seen. In the sections of the excited gland, on the contrary, nearly all the cellules, showed large, numerous and often confluent vacuoles. The granular glands, instead of secreting water and mucus, secreted water and cliastase. The vacuoles contained water. In the mucous cells this water in escaping from the cell entangled mucin and formed the mucus.

—Le Progres Medical. E. W. B.

PSEUDO DYSPEPSIAS AND ARTIFICIAL DYSPEPSIAS BY DR. PLICQUO.

These two groups of dyspepsias are perhaps from a nosological point of view liable to criticism. From a practical standpoint they have this advantage—they recall that in a large number, perhaps the largest number of cases, the cause of disorder is situated in some organ other than the stomach.

The fact is well known that affections of many of the other organs will produce dyspepsia, as also irregular or faulty diet, non-hygienic surroundings, the multiple sources of poisoning, etc.

But, as the patient refers all his malaise to the stomach, it is very easy to reach an erroneous diagnosis.

1. Pseudo dyspepsias. These may depend (1) on disorder of the several digestive organs outside of the stomach and particularly lesions of the buccal cavity and the intestines, liver.

(2) Lesions of the genito-urinary apparatus.

(3) Lesions of the nervous system.

Lesions of the buccal cavity constitute a very important cause of dyspepsia; they act by hindering mastication, from neuralgia, decayed teeth and still more frequently by becoming a source of incessant infection and poisoning.

The swallowing of pus, and the putrid products of abscess of the maxillary sinus, stomatitis, carious teeth, etc., exercise a most harmful effect on the stomach; a particular cause, important from its frequency, easily misunderstood from its apparent insignificance, is alveolar pyorrhea.

Treatment in this condition directed to the gums shows often remarkable influence over the dyspeptic state.

Buccal antisepsis, and the treatment of the various diseases of mouth, tongue, gums or teeth is therefore indicated.

On the part of the intestine all affections may cause reflex digestive disorders. Those most common are constipation, helminthiasis and hernias. In many dyspeptics the progress of constipation and gastric suffering are on parallel lines. They are only ameliorated by

overcoming the constipation. Helminthiasis produces peculiarly intense, painful and capricious phenomena, which continue until the worms are expelled.

Hernias often very small, cural inguinal, or almost imperceptible epiploceles of the linea alba may provoke great suffering, which the wearing of a truss does not always obviate.

The liver is frequently interested in the production of dyspepsia without considering hepatic congestion. It is necessary to point out two affections—hydatid cysts and lithiasis, which are frequently supposed to be simply gastric symptoms.

The seat of pain, sensibility of the gall—bladder—the jaundice tint in dyspepsia should always awaken suspicion.

2. Genito-urinary organs—In men these organs rarely play a part in dyspepsia; excessive venery or masturbation may, however, be an exciting cause. In women, however, these organs have a great influence—as is well seen in the disturbances due to pregnancy. On the part of the urinary organs it is superfluous to mention the digestive disorters due to Bright's disease.

Gastric uremia is one of the most frequent forms of uremia.

Infection from the urinary organs, from weakness of the bladder, or stricture, or cystitis often produce intense gastric phenomena, which perhaps washing out the bladder a few times causes to disappear like magic.

3. Nervous system. All dyspepsias have in reality for their prime cause nervous disorder. The association of dyspepsias and neurosis as hysteria and neurasthenia, is very common. There are indeed very few dyspeptics who are not neurasthenics, or hpyochondriacs.

It is useless to insist on this connection, but as "Vigoroux" points out, from the standpoint of results to be expected from treatment and particularly by the use of electricity in neurasthenia, the co-existence of dyspepsia, especially the flatulent variety. constitutes a very favorable element in prognosis — meningitis, cerebral troubles, ataxia, all show dyspeptic systems.

In all cases of dyspepsia the cause must be sought for, such as errors in diet, cooking, irregularity in the time of taking meals, overeating or drinking, etc.

Principal causes for poisoning.—Bad food, adulteration, stale meats or fish or vegetables, wine, beer, etc.

In the second place must be noticed poisoning by drugs, the drug habit; this may also occur from the necessary use of medicinal preparations as digitalis, creasote, quinine, morphine, are all badly tolerated by the stomach.

Professional (trade) poisoning, as by lead or mercury accidental or criminal poisoning also may bring on, if continued (as arsenic), all symptoms of dyspepsia.

Le Progrese Medicale. E. W. B.

THE ACTION OF TRIONAL.

Berliner Klin Woch. Le Progrese Medicale.

Trional, or diethylsulphomethylethylmethane, has been used for insomnia—good results have been had in a melancholic subject, in mania and in several cases of senile dementia; also in cerebral syphilis, on account of intense headache, where other hypnotics have been without effect.

It has no action on the heart (an advantage over chloral). It has been useful in heart symptoms in epileptics. It has not been useful in paralysis agitans. Beyond its hypnotic powers it has had no effect on the circulation, digestive or respiratory functions. No albumin uria or blood is found in the urine.

Posology. For a first dose. Trional should be given in two-gram doses for continued use. One gram per day is sufficient.

Mode of employment: After taking a dose of trional, it should be followed by hot drinks to favor absorption.

There is no danger of poisoning, as is shown by an attempt at suicide by taking 8 grams, where, after some vomiting, deep sleep followed with perfectly normal pulse and respiration. Some retention of urine was a temporary feature, but the excretion soon became normal. In conclusion trional is a useful hypnotics—sometime unreliable—but innocuous.

E. W. BING.

The colleges of Paris are overcrowded. The Schools of Pharmacy and of Practical Medicine are absolutely insufficient to accommodate the students. A great many are deprived of the opportunity for dissection, owing to want of room and a dearth of material. Formerly the accommodations and teaching were good, but both succumbed to "inanition" in the provinces, and to "plethora" in Paris.

Therapeutics.

Under the charge of LOUIS LEWIS, S. M. R. C. Philadelphia.

SOME DIAGNOSTIC PROBABILITIES.

When a patient evinces a tendency to sleep with the hands tightly clasped over the head, he probably suffers from some form of dyspepsia.

When a patient has "mercurial" teeth, showing that he has been long and freely dosed with mercury, he will probably develop lamellar cataract later on.

When a patient complains of dull pain at the back of the head, with lassitude and despondency, he probably suffers from excess of phosphates in the urine.

When a patient has his eyelid drooping over the eye and cannot voluntarily raise it, he is probably in danger of an apoplectic seizure, unless it follows an injury or disease, causing paralysis of the third nerve.

When a patient has a small moveable pea-like body in the lobe of the ear, it probably consists of urate of soda, and he may sooner or later be attacked with gout or some form of rheumatism.

When a patient with albuminuria is swollen, the kidneys are probably enlarged; and when the patient is emaciated, the kidneys are probably contracted. When the feet alone are swollen, the heart is probably affected; when the abdomen only is swollen, the liver is probably at fault.

When one or more acute bed-sores appear on the sacrum, the patient probably suffers from spinal disease; when they affect the buttock, he probably has cerebral fever.

When a patient has a persistent bad taste on rising in the morning, independent of stomachic derangement, he probably has or is threatened with cardiac troubles.

When the ends of the fingers become club-shaped, the changes are probably of a fibroid nature, and the patient may have phthisis, heart disease or empyema.

When a patient complains of a constant burning heat of the body, no matter what the temperature may be, combined with tremor of the tongue, and a difficulty in preserving his equilibrium, he is probably threatened with paralysis agitans.

When the muscles of the abdomen flap up and down with the movements of the diaphragm, the patient probably has some lesion or disease of the spinal cord.

When a patient commences to "drag" one leg after its fellow without raising it from the ground, although the limb itself is sound, he is probably developing some disease of the spine.

When a patient does not jerk his foot upward if the knee be struck between the tibia and patella (while the leg is dangling loosely over its fellow), he probably has some form of spinal sclerosis.

When a patient cannot stand steadily with his eyes closed, or is nervous when descending stairs, or raises one leg unnecessarily high when wanting to cross it over the other, or hesitates in rising from a chair when bidden, he is probably threatened with locomotor ataxy.

When a patient complains of severe pain in or about the heart with paroxysmal fainting spells and anxiety, and if the first sound at the base of the heart is muffled, or the aortic sound more pronounced than the pulmonary, he probably suffers from true angina pectoris due to organic disease, with atheromatous deposit and incompetency of the valves.

When a patient exhibits superficial varicose veins on the abdomen, it is a symptom of obstruction to the return of blood through the deeper veins, and he probably has cirrhosis of the liver.

When a patient advanced in years develops a hard, rigid, inelastic condition of the femoral artery, the vessel feeling like a small gas-pipe, he will probably have gangrene of the foot or leg in the near future.

When a patient suffers from continuous headache, which is either deeply seated at one spot or referred to the whole cranium, and never yields, even temporarily, to any treatment, he probably has organic disease of the brain or its membranes.

LOUIS LEWIS, M. D.

Woman's milk is considerably poorer, even though it contains on the average more sugar, than that of the cow or goat, and its specific gravity ranges from 1030 to 1034.

Mare's milk, which is the basis of koumiss, yields an oily fat very rich in soluble acids, among which butyric acid is not so prevalent as in the fat of cow's milk. Its density is from 1030 to 1035, and when allowed to undergo alcoholic fermentation it is converted into a sort of milk wine or koumiss (which has been recently used as a preventive and curative of phthisis), 100 parts, of which, according to A. W. Blyth, contain: Fat, 0.68; lactose or milk sugar, 6.60; salts, 0.66; casein, 2.84; carbonic acid, 0.90; alcohol, 1.00, and water, 87.32.

Cow's milk ranges from 1023 to 1032, and in Europe especially is most generally used for human food. It is a wholesome and highly nutritious article —if it can be obtained pure—both for adults and children. In India the yield of each cow is rather small, and it is in such demand as a substitute for the

The symptoms of spinal disease speed- unless the cow is milked in your presence you can never be sure of the purity of the milk, or of its freedom from admixture with other milks.

Goats' milk with a specific gravity of 1032 to 1036 is richer in all its ingredients than cow's milk, though it has a little less casein and sugar, and also contains hircine or hircic acid, which sometimes gives it an unpleasant odor.

Ass' milk, which closely resembles woman's milk in composition and has a density of 1023 to 1035, is far inferior to other milks in casein and fats; but exceeds them in sweetness. It is a poor aliment, but is valuable for infants and invalids whose digestive powers are feeble.

Dr. Chew, "Calcutta Medical Reporter."

THE ACTION OF CHLOROFORM.

Elaborate experiments have shown that chloroform has no direct action on the heart or circulation, and that the heart can only be affected under chloroform by interference with the breathing or by overdosing, which is practically the same thing. Accordingly, the pulse is in no way a guide to its effect. The lowering of the blood pressure caused by chloroform in effective doses is due entirely to its direct narcotic effect on the brain. Thus the finger on the pulse may be well replaced by the stethoscope over the chest. But the cessation of respiration before arrest of the heart-beat is not of itself sufficient to prove the truth of this statement.

DUBOISINE.

According to Dr. Marandon de Montyel there are four objections to this powerful hypnotic and sedative, namely: it loses its effect; it causes gastro-intestinal disturbance; it weakens the heart, and it interferes with nutrition. He says that some of these inconveniences are overcome by giving it in interrupted doses subcutaneously, and by injecting it immediately after meals, but it is contra-indicated in affections of the heart. By using it as above advised, and not for too long a period, its de-nutritive influence will be considerably modified. He recommends it especially in the treatment of general paralysis and epilepsy, As much as four milligrammes may be injected with safety for a long time.

TESTS FOR ALBUMEN.

It it doubtful whether all the tests put together are worth the old nitric acid test; the white characteristic cloud which it forms with albumen is well known, and can hardly be mistaken by anyone. Picric acid, trichloracetic acid, and others are delicate; in fact, too delicate; besides, they possess other disadvantages. The first must be in concentrated aqueous solution; the second is rather expensive, and both are rare articles, while nitric acid is always handy, and if the strong acid be employed, and care be taken to have two layers (one of acid at the bottom and one of urine above it), then the test leaves nothing to be desired, the urine having previously been tested by heating a separate portion.

—Dr. G. Sharp, Manchester.

OPIUM EATING.

Surgeon-Major Little (India) is of opinion that "moderate indulgence in opium eating exercises a distinctly beneficial influence on the moral and physical condition of the people," and he has observed "astonishing powers of endurance in those accustomed to its use." In this statement, no doubt he has reference mainly to the native troops.

Electro-Therapeutics.

Under the Charge of S. H. MONELL, M. D., 665 Lexington Ave., New York.

ERROR.

N. B.—Owing to a printer's error in our issue of March 17, the heading of the department of "Electro-Therapeutics" was placed over the columns of "Bureau of Information," page 174.

—Ed. T. and R.

FOUR CASES OF RELIEF FROM ACUTE PAINS.

Reports of simple cases are occasionally not less useful than those of rarer nature, and may teach us lessons of every day value. In those now cited the main feature was the comfort so easily and quickly afforded the patient.

Case I.—Miss W—— came to my office on January 6, of the present year, suffering from a severe toothache. She had a nervous dread of dentistry, which was somewhat intensified by the aching void in her carious molar. She therefore requested some "toothache drops" till she got courage to visit a dentist.

Instead of a local anodyne application she was treated for five minutes with a positive static spray. The pain ceased entirely, and has not returned up to the date of this writing, although she has unwisely postponed having the tooth repaired or out.

Case II.—Miss H—— was having her teeth "straightened," to improve her appearance, with the usual accompaniment of soreness, distress and liquid diet for several weeks. As she was under my care for a muscular deformity, the suffering she endured from her teeth was brought to my notice. I at once administered a positive electrical breeze directly upon the bruised and tender gums. She could close her teeth forcibly, without pain, in a few moments, and a sitting of not over six minutes removed all but a slight deep-seated tenderness. This relief, she afterwards informed me, continued until the dentist removed the "plugs" and wedged other teeth apart, when the same treatment was again effective.

At the time of her first treatment she had been enduring the distress for two weeks, it not occuring to her to come to me for relief.

Case III.—V. G.—Boy, aged 12, was brought to me crying with an aching jaw and aching head. Had just been to a dentist and had a molar drawn, but the pain continued, and the little fellow was not a Spartan.

I applied the positive spray upon the jaw, at the site of the pain for five minutes. He immediately felt relief, which rapidly became complete.

The following day his cheek was somewhat swollen, but he had no further pains and afterwards called at my office to say that he was all right and to express his high opinion of the "electricity medicine."

Case IV—Mrs. W., aged 40, came to me with an acute "sore throat." Could scarcely speak even in a whisper and felt very uncomfortable. I prescribed the usual remedy, but before sending her home I administered a positive static spray upon each side of the throat for a few minutes—until she expressed sufficient relief.

The effect was almost magical. Her voice was restored to quite its natural compass, and, as the pain of deglutition was removed, she could eat as usual without waiting for the action of either "Nature" or drugs.

She felt well during balance of the day and attended a reception in the evening. It proved to be a raw, rainy night, and the exposure produced the usual result. On awakening the next morning she could scarcely whisper and felt as bad as before.

At breakfast she had nearly complete aphonia. She then came to me for the efficient static spray. I, this time, changed the application to the induced current from the smallest Leyden jars, with the complete restoration of her voice in five minutes.

She was obliged to attend to business matters, which again took her out in the cold, blustering, March air, but her voice retained its clearness, despite the exposure of several hours.

On returning home still felt no aggravation, but by evening dysphagia and aphonia again developed and again were completely removed by the positive

spray. This application before retiring so far relieved the congestion that none of the hoarseness or soreness reappeared th next morning.

During all this time she, of course, continued her medical treatment, but the marked relief almost instantly afforded by the static application was a grateful addition to the effect of the remedy employed.

I have also given similar relief to other cases of acute coryza, quinsy and influenza.

—S. H. Monell, New York.

METALLIC ELECTROLYSIS.

The December number of the "Revue Internationale d'Electrotherapie," contains the following from the pen of Dr. G. Gautier, the author of the above valuable method:

"Several years ago I presented a new method of treatment to the medical profession, a method which has since been sustained and strengthened, not only by theory, but by numerous clinical observations.

"From my very earliest experiments with this application I became convinced of its value, and I have confidently awaited the opinions of my colleagues in this branch of therapeutics.

"The method was warmly commended at the meeting of the medical congress in Chicago, September 1893.

"Various titles have been suggested to designate this form of application, among them 'Cupric Electrolysis,' 'Metallic Electrolysis,' and Interstitial Electrolysis,' either of which would be sufficiently acceptable and rest upon a scientific basis.

"I, myself, was at first in doubt as to a descriptive term, and had decided to name my method 'Medicated Electrolysis,' when Dr. Tripier suggested that 'Interstitial' would better define the electrolytic process, and later the term 'metallic' was settled upon as being more appropriate.

"My first articles upon this subject were written in 1890, since which time I have collected a large number of records of cases which are exceedingly instructive.

"Metallic Electrolysis is, above all, useful in its application to the uterus, in combating inflammatory lesions, and arresting hemorrhages."

ELECTRICITY IN GYNECOLOGY.

"Chronic Oophoritis, and its Treatment by Electricity" is the title of a singularly comprehensive and able article, by Edward Saunders, M. D., of New York, published in Vol. XXVIII, No. 4, 1893, of the American Journal of Obstetrics.

The author gives an exhaustive presentation of the history, etiology, pathology and diagnosis of the disease, and considers the treatment—medical, surgical and electrical—in a complete and impartial manner.

He has treated sixty-five cases in all by means of galvanic and faradic currents. Of these only twenty-five continued the treatment long enough (four to six months) to test its efficacy, and of this number twenty-two, or eighty-eight per cent., were completely cured.

We quote the following from the writer's conclusions: "We may fairly conclude that for the cure of chronic oophoritis there is no remedy now before the profession which is the equal of electricity; the cure being obtained without any risk whatever to the patient, be the case simple or complicated, recent or of old standing, the only contra-indications being the presence of pus, the occurrence of acute peri-uterine inflammation or the existence of old, unyielding adhesions." The technique of the galvanic treatment employed by the writer is described in detail in the article, which deserves to be read in its entirety.

TO OUR SUBSCRIBERS.

To give our readers the benefit of every advance step in electro-therapeutics, we invite the special co-operation of earnest, painstaking investigators, who are habitually too busy to write long and ambitious articles, but whose brief, pointed, practical records of cases would be full of value and interest. In this department we shall be glad to find room for our friends in this important field to report their experiences, discoveries, inventions and original ideas.

Address these contributions to "Electro Therapeutics," "Times and Register," 1725 Arch street, Philadelphia.

Miscellany.

IMPORTANT PATENT DECISION—THE ALLEN PUMP PATENTS SUSTAINED.

Judge Grosscup, of the United States Circuit Court in Chicago, has just rendered a lengthy decision sustaining the validity of the Allen patents. This decision is the result of a suit brought by Mr. Charles Truax, Chicago, against W. C. Carroll, Burton F. Hales, et. al., of the Physicians' National Supply Co., for manufacturing and selling surgical pumps resembling those manufactured under the Allen patents.

This is an important decision and one of considerable interest to the medical profession.

BABY WITH A TAIL.

A correspondent to the Memphis Medical Monthly contributes the following:

In December last I was called to attend a lady in the country during accouchment, and seeing that she was likely to have a tedious labor, was very careful in eliciting her history prior to this trying ordeal. She stated she had not felt well for several months—ever since she had worried about some favorite young pigs that were being abused in the yard. Going out she carried the pigs into the house, lifting them fondly by the tail; and that occurrence bore on her mind, being much impressed by this novel way of transferring swine.

But alas! after labor was completed, the fond son also was blessed with a tail—a nice, well-formed tail—a tail just where a tail ought to grow—a five-inch tail. The mother, a primipara, did well, also the child; but the father, who was chagrined at so unusual an anomaly, requested its immediate amputation, which we reluctantly performed; after which he exclaimed: "Now, mine pig-boy does better."

The mother, like most women in whom I have found this tendency to "spot" their young, was of a very frail and nervous temperament, and more than all, was ignorant.

But in conclusion, I am convinced that such mothers can, and do often, transmit their mental impressions to the child in utero, thus developing the many so-called mother's marks. I could relate several similar instances.

Mace, Ind. JULIAN BERRY, M. D.

THE INDIAN MEDICAL CONGRESS.

The proposal to have a Medical Congress in India was considered at a meeting of the Council of the Calcutta Medical Society on January 24, when it was decided that an "Indian Medical Congress" shall be held in Calcutta at the beginning of January. 1895. The preliminary arrangements were discussed and a general plan sketched out.

It was decided that in each province local secretaries, native as well as European, should be asked to co-operate with the Calcutta secretaries, and it was further decided that the sections into which the Congress should be divided should be:—1. Medicine, including Pathology. 2. Surgery. 3. Obstetrics and Diseases of Women and Children. 4. Public Health. 5. Medico-legal Medicine and allied subjects.

Further details will be given in a future issue. It was decided that the Congress should be widely advertised, and that all medical men practicing in every part of the world, but especially in India and the East, should be invited to take part in it and submit papers to be read in the different sections.

A NEW SOCIETY.

The students of the Medico-Chirurgical College have honored their professor of Diseases of the Eye by forming an ophthalmic society within their ranks. This is the first society of the kind organized in any college in the country. It is called "The L. Webster Fox Ophthalmological Society of the Medico-Chirurgical College of Philadelphia," and is composed of members of the senior class at the college. As these graduates leave, their places will be filled by members of the junior class. It is intended, however, to make the society a permanent and influential one. With this object, graduating students will still retain their membership in the society.

It is proposed to hold an annual banquet, at which a general reunion will take place. Leading eye specialists in every State will be admitted to honorary membership.

The following students are the active members of the society: President

Ignatius Mayer; Vice President, John A. James; Secretary, Matthew Beardwood, Jr.; Treasurer, George A. Wise; Curator, Edmund M. Kimmell. Charter Members: Matthew Beardwood, Jr., Edward A. Crueger, William W. Fritz, Frederick C. Hall, John A. James, J. R. Jamison, Edmund M. Kimmell, Ignatius Mayer, Charles Thompson, Mitchell P. Warmuth, Alfred J. Wenner, George A. Wise.

A new society has been formed in the Medico-Chirurgical College called "The William H. Pancoast Anatomical and Surgical Society," the object of which is to advance anatomical and surgical knowledge among the students by contributions of written essays and discussions.

Osceola, Miss. Co., Ark., March 7.

Dear Sir:

Please give me through the "Times and Register" at as early a date as possible the best and latest treatment for nasal catarrh. What is the best combination for constitutional treatment? What for local application?

A boy, 10 or 12 years old, during the Christmas holidays had, by the premature discharge of a Christmas gun, his face blown literally full of gunpowder. The skin now presents a dark blue color, is rough to the touch, but is perfectly free from sensitiveness. It is a source of great annoyance to his parents. To undertake to remove a grain at a time is impossible. How can I remove it? A reply to these two questions will be appreciated by an admirer of yourself and a constant reader of the "Times and Register." Respectfully,

THOMAS G. BREWER.

(For nasal catarrh: Clean out the nose thoroughly by douche or spray of Dobell's solution, and then spray with compound albolein spray solution, twice or oftener daily. Internally give iodide of iron for scrofula, calcium hypophosphite for the structural debility, mercury for syphilis, colchicum for plethora; in other words, use whatever the constitutional state requires. I know of nothing that will remove the powder stains without causing more deformity than it cures. I have employed electrolysis, but with little result. There is some local remedy that is said to dissolve the carbon, but I cannot now recollect it, and have never used it.

W. F. W.)

AN APPLICATION FOR BURNS, FREYSSINGE.

"L'Union Medicale" reports that M. Grigorescu treats burns by means of glycerine; he applies some drops of this liquid, and rubs very lightly over the burnt part. A slight sensation of heat is experienced, followed almost at once by a sensation of coolness or anesthesia.

Inflammation is avoided completely, further the elimination of the epithelial layers is made gradually, and the cicatrix is less marked. The burnt part should be constantly wet with glycerine. The following is a good formula.

		Grams.
R	Laudanum	3
	Cherry laurel water	20
	Glycerin	40

Keep constantly on the burn by means of a cotton compress.

Prescriptions.

FOR SWEATING IN PYTHISIS.

		Grams.
R	Acid Salicylic	2
	Aqua purae	10
	Alcoholis	6
	Glycerinae purae	4

M. Sig. For hypodermic injection at bedtime, 2 cc equal to 20 cubic grams of salicylic acid are injected, repeated every four or five days.

E. W. B.

ANTISEPTIC SOLUTION.

		Gram.
R	Acid thymic	1
	Alcohol, at 90 per cent.	4
	Aq. destil	995

—Medical Record.

DEPLETORY.

		Gram.
R	Iodi pur	80
	Ol. terebinthinae	130
	Ol ricini	2
	Alcohol	8
	Collodii	30

M. S. Apply daily for three days.

—New York Medical Record.

SCIATICA.

		Gram.
R	Tinct. aconite rad.	4
	Tinct. colchici sem.	4
	Tinct. belladonnae	4
	Tinct. cimicifugae	4

M. Sig. Twelve drops every four to eight hours.

LARYNGITIS.

		Gram.
R	Tinct. aconiti rad.	15

Sig. One drop every hour in water. Best results when following a dose of castor oil.

—Sargins.

		Gram.
R	Potassii permanganatis	12
	Aqua destil	60

Sig. Spray larynx with an atomizer several times a day.